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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/502,258	02/11/2000	Christoph Wuersch	32396	4922

116 7590 09/05/2002

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526 SUPERIOR AVENUE EAST
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CLEVELAND, OH 44114-1484

EXAMINER

NI, SUHAN

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 09/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/502,258

Applicant(s)

WUERSCH, CHRISTOPH

Examiner

Suhan Ni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to the applicant's amendment dated 06/12/2002.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin (US-5,796,848).

Regarding claim 1, Martin discloses a hearing aid comprising: a microphone (1) and an ADC (7), wherein the microphone is encapsulated in an electromagnetic shielding case (6) and the ADC is mounted on the electromagnetic shielding case.

Regarding claim 3, Martin further discloses the hearing aid, wherein the microphone system (1) and the ADC are detachably combined in modular manner (Fig. 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gnecco et al. (US-6,031,923) in view of Brennan et al. (US-6,236,731).

Regarding claim 1, Gnecco disclose a hearing aid comprising: a microphone (Fig. 7) encapsulated in an electromagnetic shielding case (11) as claimed. But Gnecco does not clearly teach an ADC mounted on the electromagnetic shielding case as claimed. Brennan et al. disclose a hearing aid comprising two microphones and two ADC for obtaining acoustic signals for digital signal processing. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to be motivated to provide ADC taught by Brennan et al. for the hearing aid as an alternate choice, for providing a more advanced signal processing, digital signal processing for the hearing aid. Furthermore, it would also have been obvious to one having ordinary skill in the art at the time the invention was made to mount the ADC on the electromagnetic shielding case and next to the microphone for reducing electromagnetic noises.

Regarding claims 4 and 7, Gnecco does not clearly teach at least two microphone inputs and further signal processing as claimed. Brennan et al. further disclose the hearing aid comprising two microphones inherently having desirable characteristics (Fig. 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to be motivated to provide at least two microphones and signal processing channels taught by Brennan et al. for the hearing aid, for enhancing the performance of the hearing aid.

4. Claims 2-3 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gnecco et al. (US-6,031,923) and Brennan et al. (US-6,236,731) as applied to claim 1 above, and further in view of Husung (US-5,809,151).

Regarding claims 2-3 and 5, neither Gnecco nor Brennan et al. clearly disclose the ADC being encapsulated in a shielding case as claimed. Husung discloses an electromagnetic shielding

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case (15) for circuitry components of a hearing aid (Fig. 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to be motivated to provide the electromagnetic shielding case taught by Husung for circuitry components, such as ADC of a hearing aid as an alternate choice for further reducing electromagnetic noises.

Regarding claim 6, Gnecco does not clearly teach at least two microphone inputs and further signal processing as claimed. Brennan et al. further disclose the hearing aid comprising two microphones inherently having desirable characteristics (Fig. 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to be motivated to provide at least two microphones and signal processing channels taught by Brennan et al. for the hearing aid, for enhancing the performance of the hearing aid.

Response to Amendment

5. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL

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THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

7. Any response to this final action should be mailed to:

**Commissioner of Patents and Trademarks
Washington, D.C. 20231**

or faxed to:

(703) 308-9051, (for formal communications; please mark "EXPEDITED PROCEDURE"), or

(703) 305-9508, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to:

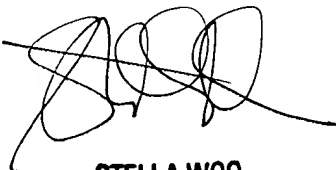
**Receptionist, Sixth Floor,
Crystal Park II,
2121 Crystal Drive,
Arlington, Virginia 22202**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is **(703)-308-9322**, and the number for fax machine is **(703)-305-9508**. The examiner can normally be reached on Monday through Thursday from 9:00 am to 7:30 pm. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at **(703) 305-4708**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is **(703) 305-3900**.

SN

August 26, 2002



**STELLA WOO
PRIMARY EXAMINER**